

What is claimed is:

1. A medical device for implantation into tissue of a patient or use in fluid preparation to be delivered to a patient, said device comprising a polymeric material impregnated with a organic dye exhibiting antibacterial activity and effective to release the organic dye into contacting media for at least a week.
2. The device of claim 1 wherein the organic dye is homogeneously distributed within the polymeric material.
3. The device of claim 1 wherein the organic dye leaches from the polymeric material for at least two weeks.
4. The device of claim 1 wherein the organic dye leaches from the polymeric material for at least one month in an amount sufficient to inhibit bacteria growth.
5. The device of claim 1 wherein the polymeric material comprises a polymer selected from the group consisting of: acrylics, polyacrylates, polymethacrylates, fluorocarbons, hydrogels, polyacetals, polyamides, polyurethane/polycarbonate, polyesters, poly(ether, ketones) (PEK), polyimides (nylons), polyolefins, polystyrene, polysulfones, polyurethanes, polyvinyl chloride (PVC), polycarbonate, silicone rubbers, polyethylene, polyurethane, latex, polyesters, poly(ethylene-terephthalate), and blends of these polymers.
6. The device of claim 1 wherein the polymeric material comprises a polymer selected from the group consisting of: poly(amino acids), polyanhydrides, polycaprolactones, poly(lacti-glycolic acid), polyhydroxybutyrates, polyorthoesters, and blends of these polymers.

7. The device of claim 1 wherein the organic dye is selected from the group consisting of: methylene blue, toluidine blue, methylene violet, azure A, azure B, azure C, brilliant cresol blue, thionin, methylene green, bromcresol green, gentian violet, acridine orange, brilliant green, acridine yellow, quinacrine, trypan
5 blue, trypan red and mixtures of these dyes.

8. The device of claim 1 wherein the reducing agent is selected from the group consisting of: ascorbic acid, ferrous gluconate..

10 9. The device of claim 1 wherein the polymer releases the organic dye for at least one month.

10. The device of claim 7 wherein the polymer releases the organic dye for at least two months.

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11. The device of claim 1 comprising a catheter.

12. The device of claim 1 comprising a suture or a surgical staple.

20 13. The device of claim 1 comprising one or more fluid circuits within a dialysis machine and a water purifying system.

14. The device of claim 1 comprising an absorbent sponge.

25 15. A method of manufacturing polymeric material for a medical device, said method comprising:

contacting the polymeric material with a liquid composition comprising a organic dye and a reducing agent for a time sufficient to impregnate the polymeric material with the organic dye ; and

30 removing the impregnated polymer from the liquid composition.

16. The method of claim 15 wherein said contacting comprises immersing the polymeric material in the liquid composition for a time selected to be between about one minute and about 24 hours.

5 17. The method of claim 16 wherein said contacting comprises immersing the polymeric material in the liquid composition for a time selected to be between about 60 minutes and about 240 minutes.

10 18. The method of claim 15 wherein the liquid composition is an aqueous composition.

15 19. The method of claim 15 wherein the liquid composition comprises a solvent selected from the group consisting of: water, an alcohol, tetrahydrofuran, acetone, and mixtures thereof.

20 20. The method of claim 15 wherein the polymeric material comprises a polymer selected from the group consisting of: acrylics, polyacrylates, polymethacrylates, fluorocarbons, hydrogels, polyacetals, polyamides, polyurethane/polycarbonates, polyesters, poly(ether, ketones) (PEK), polyimides (nylons), polyolefins, polystyrene, polysulfones, polyurethanes, polyvinyl chloride (PVC), silicone rubbers, polyethylene, polyurethane, latex, polyesters, poly(ethylene-terephthalate), and blends of these polymers.

25 21. The method of claim 15 wherein the polymeric material comprises a polymer selected from the group consisting of: poly(amino acids), polyanhydrides, polycaprolactones, poly(lacti-glycolic acid), polyhydroxybutyrates, polyorthoesters, and blends of these polymers.

22. The method of claim 15 wherein the organic dye is selected from the group consisting of: methylene blue, toluidine blue, methylene violet, azure A, azure B, azure C, brilliant cresol blue, thionin, methylene green, bromocresol green, gentian violet, acridine orange, brilliant green, acridine yellow, quinacrine, trypan
5 blue, trypan red and mixtures of these dyes.

23. The method of claim 15 wherein the reducing agent is selected from the group consisting of: ascorbic acid, ferrous gluconate, other reducing agents and mixtures thereof.

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24. A medical device for implantation into tissue of a patient or use in fluid preparation to be delivered to a patient, said device comprising a polymeric material impregnated with a phenothiazine dye exhibiting antibacterial activity and effective to release the organic dye into contacting media for at least a week.

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25. A method of treating a patient having an indwelling medical device, said method comprising:

selecting a medical device comprising a polymeric material impregnated with a organic dye exhibiting antibacterial activity and effective to release a
20 portion of the organic dye for at least one week, and
implanting the medical device into the patient.